

Amendments



Amendments to the Claims:

1. (Currently amended) A porous composite matrix, comprising a matrix constructed from matrix formers comprising a hyaluronic acid derivative and a hydrolyzed collagen, and wherein the matrix formers are present in a weight ratio range of hyaluronic acid derivative to hydrolyzed collagen of 30:70 to 99:1, and wherein the hyaluronic acid derivative is a hyaluronic acid ester.
2. (previously presented) The composite matrix as claimed in claim 1, wherein the matrix formers are present in a weight ratio range of hyaluronic acid derivative to hydrolyzed collagen of 60:40 to 99:1.
3. (previously presented) A composite matrix as claimed in claim 1, wherein the hydrolyzed collagen is partially or completely hydrolyzed.
4. (previously presented) A composite matrix as claimed in claim 1, wherein the hydrolyzed collagen is additionally derivatized and/or crosslinked.
5. (canceled)
6. (previously presented) A composite matrix as claimed in claim 5, wherein the hyaluronic acid ester is an ethyl or benzyl ester of hyaluronic acid.
7. (previously presented) A composite matrix as claimed in claim 1, further comprising pores having an average diameter in the range of 10-1000 μm .
8. (previously presented) A composite matrix as claimed in claim 7, wherein the pores have an average diameter in the range of 100-350 μm .
9. (previously presented) A composite matrix as claimed in claim 7, wherein the pores have an average diameter in the range of 350-1000 μm .
10. (previously presented) A composite matrix as claimed in claim 8 further comprising pores in the range of 10-100 μm .
11. (previously presented) A composite matrix as claimed in claim 1, further comprising crosslinkages.
12. (previously presented) A composite matrix as claimed in claim 1, further comprising biologically active compounds.

13. (previously presented) A composite matrix as claimed claim 1, further comprising chondrocytes, mesenchymal stem cells, mesenchymal progenitor cells, osteoblasts and connective tissue cells.

14. (withdrawn) A process for the production of a porous composite matrix as claimed in ~~one of claims 1-13~~ claim 1, comprising:

~~the dissolution or suspension of the~~ dissolving or suspending a hyaluronic acid derivative and ~~[[the]]~~ a hydrolyzed collagen in a suitable first solvent to form a solution or suspension;

~~the addition of~~ adding a pulverulent compound to the solution or suspension, wherein the pulverulent compound ~~[[which]]~~ is virtually insoluble in the first solvent, but is soluble in a second solvent, in which the matrix formers hyaluronic acid derivative and hydrolyzed collagen are virtually insoluble, ~~to the solution or suspension~~, and wherein the pulverulent compound ~~having~~ has an average particle size distribution in the range of the desired pore size of the composite matrix to be produced;

~~the removal of~~ removing the first solvent; and

~~subsequently the dissolution of~~ dissolving the pulverulent compound in ~~[[a]]~~ the second solvent, in which the pulverulent compound dissolves and the matrix formers are virtually insoluble to obtain said porous composite matrix.

15. (withdrawn) The process as claimed in claim 14, ~~in which~~ wherein the first solvent is 1,1,1,3,3,3-hexafluoro-isopropanol.

16. (withdrawn) The process as claimed in claim 14, ~~wherein or 15, in which~~ the pulverulent compound is a water-soluble alkali metal or alkaline earth metal salt, ~~in particular an alkali metal halide such as sodium chloride~~.

17. (withdrawn) The process as claimed in ~~one of claims 14-16~~ claim 14, ~~in which~~ wherein the second solvent is water.

18. (withdrawn) The process as claimed in ~~one of claims 14-17~~ claim 14, ~~in which~~ wherein the composite matrix is additionally shaped, dried and optionally sterilized.

19. (withdrawn) The process as claimed in ~~one of claims 14-18~~ claim 14, ~~in which~~ wherein the composite matrix is additionally optionally loaded with biologically active compounds and chondrocytes, mesenchymal stem and progenitor cells, osteoblasts or connective tissue cells.

20-22. (canceled)

23. (previously presented) An implant, comprising a porous composite matrix as claimed in claim 1.

24. (currently amended) A process for the production of [[an]] the implant as claimed in claim 23, ~~comprising coating a porous composite matrix onto a surface of said implant, wherein said porous composite matrix comprises a matrix constructed from matrix formers comprising a hyaluronic acid derivative and a hydrolyzed collagen, and wherein the matrix formers are present in a weight ratio range of hyaluronic acid derivative to hydrolyzed collagen of 30:70 to 99:1.~~

25. (previously presented) The composite matrix as claimed in claim 1, wherein the matrix formers are present in a weight ratio range of hyaluronic acid derivative to hydrolyzed collagen of approximately 70:30.

26. (previously presented) A composite matrix as claimed in claim 9, further comprising pores in the range of 10-100 μm .

27. (withdrawn) The process as claimed in claim 14, wherein the pulverulent compound is an alkali metal halide.

28. (withdrawn) The process as claimed in claim 14, wherein the pulverulent compound is sodium chloride.

29. (previously presented) The process as claimed in claim 15, wherein the pulverulent compound is a water-soluble alkali metal or alkaline earth metal salt.

30. (withdrawn) The process as claimed in claim 15, wherein the pulverulent compound is an alkali metal halide.

31. (withdrawn) The process as claimed in claim 15, wherein the pulverulent compound is sodium chloride

32. (currently amended) A process for generating differentiated tissue from chondrocytic cells or mesenchymal stem and progenitor cells, comprising adding freshly removed or amplified cells to a composite matrix as claimed in claim 1, and ~~optionally~~ culturing said cells under chondro-, osteo- or fibrogenic conditions.

33. (previously presented) A process for generating differentiated tissue from chondrocytic cells or mesenchymal stem and progenitor cells,

comprising culturing cells added to a composite matrix as claimed in claim 1 under chondro-, osteo- or fibrogenic conditions.

34. (currently amended) The process as claimed in claim 32, wherein said differentiated tissue is suitable for construction of process ~~is for the tissue engineering of tissue types of the~~ a connective and supportive apparatus.

35. (currently amended) The process as claimed in claim 32, wherein said differentiated tissue comprises process ~~is for the in-vivo differentiation differentiated of the cells to tissue types of the~~ a connective and supportive apparatus.

36. (previously presented) The process as claimed in claim 34, wherein said tissue is chondral and osseous tissue.

B 37. (currently amended) The composite as claimed in claim 12, wherein the biologically active compounds are selected from the group consisting of antibiotics, compounds for improving cell adhesion, calcium salts, inductive factors, and further non-hyaluronic acid glycosaminoglycans and their derivatives.

38. (previously presented) The process as claimed in claim 35, wherein said tissue is chondral or osseous tissue.
